



## 2015-2016 School Nominee Presentation Form

### ELIGIBILITY CERTIFICATIONS

#### School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

### U.S. Department of Education Green Ribbon Schools 2015-2016

Public  Charter  Title I  Magnet  Private  Independent  Rural

Name of Principal: Mr. David Groat

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: Garmisch Elementary Middle School

(As it should appear on an award)

Official School Name Mailing Address: Am Herrgottschrofen 716 82467, Garmisch Partenkirchen DE

(If address is P.O. Box, also include street address.)

County: N/A State School Code Number \*: N/A

Telephone: 4988217502611 Fax: 314-440-2611

Website/URL: [www.dodea.edu/Europe/Bavaria/Garmisch/GarmischEMS](http://www.dodea.edu/Europe/Bavaria/Garmisch/GarmischEMS) E-mail: [david.groat@eu.dodea.edu](mailto:david.groat@eu.dodea.edu)

*\*Private Schools: If the information requested is not applicable, write N/A in the space*

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

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ou=GROAT.DAVID.E.1266834418  
Date: 2015.11.23 15:37:52 +0100'

Date: November 23, 2015

(Principal's Signature)

Name of Superintendent/Area Director: Dr. Liz Dunham and Dr. Dell McMullen



(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

District Name: Bavaria District - Europe

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

DUNHAM.ELIZABETH.A.11408  
10718

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ou=ODEA, cn=DUNHAM.ELIZABETH.A.1140810718  
Date: 2015.11.24 11:35:54 +0100

Date: November 24, 2015

(Superintendent's Signature)

### Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: Headquarters, Department of Defense Education Activity

Name of Nominating Authority: Dr. Linda L. Curtis, Principal Deputy Director and Associate Director of Academics  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

Date: January 29, 2016

(Nominating Authority's Signature)

### SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

### SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to [ed.green.ribbon.schools@ed.gov](mailto:ed.green.ribbon.schools@ed.gov) according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

### Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email [ICDocketMgr@ed.gov](mailto:ICDocketMgr@ed.gov) and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.



## ***Garmisch Elementary Middle School***

Headquarters Department of Defense Education Activity (HQ DoDEA) Nominee to  
U.S. Department of Education Green Ribbon Schools Program



### ADDENDUM TO 2015-2016 SCHOOL NOMINEE PRESENTATION FORM

As a unique Federal entity, the Department of Defense Education Activity and its schools (the Department of Defense Dependents Schools (DoDDS) that are located overseas, and the Domestic Dependent Elementary and Secondary Schools (DDESS) located in the U.S.) are not under the auspices of the U.S. Department of Education. However, DoDEA processes and procedures comply with all federal laws, including those concerning the investigation of civil rights complaints and complaint reviews, and the administration of the Special Education Program.

Prepared by  
HQ DoDEA Facilities Branch  
January 2016



**DoDEA Application:**

**1. School Contact Information:**

School Name: Garmisch Elementary Middle School  
 Installation: United States Army Garrison Bavaria, Germany  
 Street Address: Unit 24511  
 City: APO State: AE Zip: 09053  
 School Website: <http://www.dodea.edu/Europe/Bavaria/Garmisch/GarmischEMS/index.cfm/> Principal Name: David Groat  
 Principal Email Address: David.groat@eu.dodea.edu  
 Principal Phone Number: 4988217502611  
 Total school enrollment: 100  
 DoDEA District: Bavaria District DoDEA Area: Europe  
 School type: Elementary Middle School (Kindergarten through 8<sup>th</sup> Grade)  
 Percent Disadvantaged Background Population (Free/Reduced Price School Lunch): 7%

**2. Application Team Information.**

Lead Applicant Name (who prepared the application): David Groat  
 Lead Applicant Title (e.g., teacher, principal): Principal  
 Lead Applicant Email: david.groat@eu.dodea.edu  
 Lead Applicant Phone Number: 4988217502611

**Application Team Members:** (Others who helped prepare this application)

	Name (First and Last)	Title/Department
1	Amy Cox	School Nurse
2	Michael Holtz	School Support Assistant
3	Mandy Radloff	Director of Public Works
4	Deb Young	School Counselor/4 <sup>th</sup> Grade Teacher

## **Part II: Summary of Achievements.**

### **Summary Narrative:**

By integrating health, wellness and environmental responsibility into a 21<sup>st</sup> Century learning environment, Garmisch Elementary Middle School (GEMS) embodies not only green living but also green learning and leading. From the “Healthy People, Healthy Planet” wellness program to the recycling/composting program, GEMS has created a multi-tiered, comprehensive program which provides students with the 21<sup>st</sup> Century tools they need in order to be responsible, environmentally conscious and successful members of a global society.

Improving the environment while providing students with rigorous and relevant learning opportunities is a cornerstone of our Green School Program. A particular strength of our program is that it extends well beyond simply educating students about green living. GEMS provides opportunities for students to apply and extend learning in “hands on,” practical settings, which directly benefit the community. For example, beyond simply implementing a recycling, composting and waste reduction program, students at GEMS used this opportunity as a way to integrate environmental and sustainability education with Science, Technology, Engineering and Math (STEM) concepts. GEMS’s students designed and constructed compost bins to collect organic waste. Students also developed a campaign focused on waste reduction, and collected and analyzed types of waste generated at GEMS to determine the impact of the recycling and composting program. As a result of the compost project, recycling initiative, and student led campaign to reduce waste, students determined that the amount of waste going into the regular trash was reduced by 83%! Students will continue to extend and apply 21<sup>st</sup> century skills through designing and constructing a garden. The school garden, which will be planted in the spring of 2016, will utilize soil generated from the compost.

GEMS is committed to not only protecting the planet but also promoting healthy lifestyles. With the implementation of its “Healthy People, Healthy Planet” program, GEMS has made health and wellness a focus for students and staff. The school counselor and nurse have partnered with teachers to provide a whole health curriculum for all students. The school counselor teaches weekly classes which target social and emotional well-being. The school nurse has developed and implemented a healthy lifestyle and nutrition curriculum which has been taught in all classes. Families receive education and information through “Nurse’s Notes” a health/wellness newsletter, which is routinely featured in the school’s Weekly Bulletin. Families will be able to learn more about the benefits of a healthy lifestyle during GEMS’s Spring Health and Fitness Night.

The school nurse has extended the “Healthy People, Healthy Planet” program to staff by offering weekly fitness activities and organizing staff participation in the Garrison’s Healthy Lifestyle Challenge. The majority of staff model healthy living for students by leading active lifestyles. Last year, half the staff regularly walked or biked to school, 47% of the teaching staff served as volunteer instructors for the school’s Wonderful Wednesday ski program and 20% of the staff competed together in a team endurance race. Students are also committed to improving the environment and engaging in an active lifestyle, with over half of the students walking or biking to school each day.

Located in the Bavarian Alps, in a town that has been internationally recognized for its healthy climate and outdoor recreation opportunities, GEMS's commitment to health and wellness extends well beyond the classroom walls. After school clubs provide students with the opportunity to participate in physical activity and experience some of the outdoor recreation opportunities which exist in Garmisch. Formed through a partnership with the Garrison's Children and Youth Services, the Outdoor Education Club provides middle school students with a chance to promote teambuilding and problem solving skills through participating in outdoor activities such as hiking, climbing and geocaching. As evidenced by a 92% participation rate, the students love the hands on learning opportunities that this club provides. The GEMS Running Club and Dance Club seeks to get students excited about physical activity, and help them build their stamina, coordination and strength. With over half the student body participating in either the Running or Dance Club, GEMS students are clearly excited about maintaining a healthy lifestyle. GEMS's Turkey Trot Fun Run, Spring Sprint and Field Day allow students and families additional opportunities to participate in fitness activities.

Encouraging physical activity is a year round priority for GEMS. Through strong partnerships with the Garrison, the Edelweiss Lodge, Children and Youth Services, and numerous community volunteers, the Wonderful Wednesday Ski Program provides students with the chance to take advantage of the recreation opportunities which exist in our alpine environment. During the winter months, GEMS students learn to ski by participating in weekly three-and-a-half-hour ski lessons. Not only does this program encourage physical activity and increased self-confidence, but it also provides students with an incredible sense of accomplishment in learning new skills.

Accomplishments related to Green Initiatives at the school are a direct result of a high level of enthusiasm and commitment by students and staff, as well as strong support from community partners including Garrison leadership, the Department of Public Works and numerous community volunteers.

GEMS is continually identifying ways to further improve and expand the school's commitment to providing a learning environment that promotes green living, learning and leading. GEMS will further demonstrate their commitment to going green with a planned renovation/expansion in 2017. This construction project will include features which will improve the building's energy efficiency and will include sustainability features which will improve air quality, target water and electricity consumption and result in cost savings for the school. The expansion will also allow for the addition of a greenhouse/lab which will be used for "hands on" studies relating to sustainable energy, horticulture and plant reproduction on a year round basis.

GEMS is incredibly proud of the comprehensive, authentic and effective program which we have developed and implemented to green living within our community. We look forward to continuing to build a culture which instills not only a commitment to healthy living and environmental responsibility, but also prepares our students for successful futures.

**Green School Program and Awards.**

1. Does your school participate in a local, state, or national green schools program?

Yes ( ) No                      Program(s) and level(s) achieved:

**Table Showing Participating Status in Local, State, or National Green Schools Program:**

1	USAG, Bavaria Recycling Program	Completed and Ongoing	Fully Implemented, June 2015
2	21 <sup>st</sup> Century Skills Professional Development Program	Ongoing, Year 3	Ongoing
3	GEMS Healthy People, Healthy Planet Wellness Program	Ongoing, Year 3	Fully Implemented, Ongoing

2. In the past five years, has your school, staff, students or student groups received any awards for environmental stewardship, student and staff health and wellness, or environmental education/civic programs?

Yes ( ) No                      If yes, provide award details below:

**Table Showing Awards Received for Environmental Stewardship, Wellness or Environmental Education**

1	Certificate of Appreciation for Composting and Recycling	Garmisch Elementary Middle School	USAG Bavaria Deputy Garrison Manager, Garmisch	2015
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**DoDEA Application**

**Pillar 1: Reduce environmental impact and costs.**

**Element 1A: Energy conservation strategies.**

1. Which of the following programs or practices has your school implemented to conserve energy and to protect our environment from the negative effects of buildings and transportation? (Check all that apply)

- Our school has an energy management plan in place that describes the steps we are taking, the key participants, our goals, and a schedule for conserving energy and reducing energy costs.
- Our school participated in an energy efficiency program that resulted in a comprehensive energy audit and cost effective energy efficiency improvements.
- Our school has set and met an energy conservation target every year since we started our program.
- Our school energy use is tracked and benchmarked using EPA ENERGY STAR Portfolio Manager or an equivalent installation program.
- Our school is EPA Energy Star certified this year.
- 5% or more of the energy used at our school is obtained from on-site or off-site renewable energy sources.
- Our new school was built to meet Leadership in Energy and Environmental Design (LEED) green building standards.
- Our school has a greenhouse gas emission reduction plan in place that targets energy use. We measure our annual progress against our reduction goal.

2. Use the list above as a guide to describe how your school programs, policies, and actions have reduced the amount of energy used in your building(s). Include data. Also include information about your efforts to protect our environment from greenhouse gas emissions, how you set your goals for reduction, and how you measure your progress. Work as needed with your installation energy program management team to get information about your energy use (Maximum 250 words).

Germany has been cited as an international leader with regards to its focus on renewable, sustainable energy. As a school located on a military base in Germany, both US and the strict environmental/energy regulations in Germany must be recognized, and GEMS is required to meet the stricter of the two regulations. Although GEMS has developed an informal internal energy management plan, it is difficult to measure consumption and set conservation goals without the ability to effectively measure energy use. GEMS has advocated for, and is excited that an electrical metering system has been funded to be installed which will allow for monitoring of energy use.

GEMS has actively worked to reduce electricity consumption by participating in garrison sponsored energy conservation initiatives. GEMS is very fortunate that all classrooms have large banks of windows which allow for teachers to regularly use natural light, in place of electrical lighting. The large windows and sunlight also provide a passive solar heating source for

classrooms. The school is constructed with large overhangs and is surrounded by large deciduous trees which shade the building during warmer months and allow light to enter during the winter months. The school's planned expansion, which is slated to begin construction in 2017, has been designed with conservation in mind. The majority of the sustainability features that will be installed in the new school addition are related to energy efficiency. The installation of extensive insulation upgrades, LED interior lighting, and improvements to the heating and ventilation system will drastically enhance energy savings.

**Element 1B: Water quality, efficiency, and conservation.**

1. Which of the following practices contribute to the protection and conservation of the school domestic (drinking) water? (Check all that apply)

We are served by an installation/privatized utility water provider that is required to report annually on the quality of our water.

Our school has its own well and we do water sampling in accordance with our local and state health authorities.

Our building maintenance department cleans all water taps and drinking fountains on a regular basis to prevent bacterial contamination.

We have a water reduction plan in place that includes:

low-flow water fixtures

native drought-tolerant plants

minimal or no landscape irrigation

Our school water use is tracked and benchmarked using EPA ENERGY STAR Portfolio Manager or an equivalent installation program.

We use only non-potable water (such as water collected from a rain barrel or rain cistern) for irrigation.

Our school has a greenhouse gas emission reduction plan in place that targets water use. We measure our annual progress against our reduction goal.

2. Use the list above as a guide to describe how your school implemented and is maintaining your water conservation program including your baseline, your goal, and your reduction rate to date. Explain how you will continue to reduce water use to meet your goal. Include who in the school participates in the water conservation program. Describe the work done to protect water taps and drinking fountains from bacterial contamination. Work as needed with your installation energy program management team to get information about your energy use (Maximum 250 words).

The water at Garmisch Elementary Middle School (GEMS) is serviced by the city water authority and is sampled in accordance with local authorities. In addition, the US Army Health Command tests the water for bacteria and chlorine residual on a quarterly basis to ensure that the water is safe. The maintenance department cleans all water taps, sinks and bathrooms daily to prevent bacterial contamination. The maintenance department also checks faucets and toilets for leaks on a daily basis. GEMS drinking water comes from high quality groundwater which

requires minimal treatment prior to distribution.

Water conservation is a priority at GEMS. The landscaped areas, playgrounds and playing fields at GEMS are not irrigated. Roof downspouts are connected to soakaways which minimize runoff and allow for infiltration back to aquifer. Drinking fountains are water saving fountains. In the planned expansion/remodel slated to begin in 2017, sustainability features which target water conservation will be installed.

To educate staff and students regarding the importance of water conservation, 4<sup>th</sup> grade students created a water conservation awareness program and provided education to 100% of students and staff regarding the importance of water conservation. Signs are posted in the restrooms reminding students and staff to conserve water.

### **Element 1C: Waste Management and Product Procurement.**

1. Which of the following programs has the school initiated and maintained to reduce solid waste, eliminate hazardous waste, and procure environmentally preferable products? (Check all that apply).

Our school has initiated and maintained a solid waste management plan that includes waste reduction practices, collection of recyclable and compostable materials, elimination of hazardous waste, and preferred-purchasing requirements.

Our recycling program collects every material that is collected on our installation.

Our school composts organic materials on site.

Our school only purchases office/classroom paper that is 50% or more post-consumer material.

Our school only purchases office/classroom paper made of fibers from forests certified as responsibly managed in accordance with Forest Stewardship Council, Sustainable Forestry Initiative, or a comparable certification standard.

Our school purchases office/classroom paper that is totally chlorine-free (TCF) or processed chlorine free (PCF).

All new furniture purchases are certified by the Business and Institutional Furniture Manufacturers Association or a comparable standard.

Hazardous and dangerous products at our school have been reduced or eliminated.

Hazardous, dangerous, and universal wastes at our school are handled and disposed of in accordance with federal and state regulations.

Our school has a greenhouse gas emission reduction plan in place that targets solid waste reduction and recycling. We measure our annual progress against our reduction goal.

2. Use the list above as a guide to describe your solid waste management plan, including goals, materials you collect to be recycled or composted, your current recycling rate, and how you calculated the recycling rate. Include who participates in the waste management program, any student learning objectives, and the educational and environmental benefits to date. Provide an



overview of your environmentally preferred purchasing. Work as needed with your installation hazardous waste program manager or recycling program manager to gather information about your efforts in this area (Maximum 250 words).

As part of the Garmisch Military Community, GEMS instituted a recycling program during SY 14/15. Paper, plastic, metal, glass, electronic equipment and wood are separated and recycled. GEMS also began an onsite composting program last year. Using the engineering design process, students designed and constructed a small scale model, and then built a three stage compost site from recycled wood. All organic waste from the school is composted. Soil from the compost bins will be used for the school garden. Grass clippings are taken to a local Bio Gas Production plant.

To kick off the recycling/composting program, students weighed types of waste so they could track the results of the recycling/composting program. While implementing the recycling/composting program, students simultaneously rolled out a marketing campaign to reduce paper towel usage and encourage the use of reusable lunch containers. After implementing these efforts, non-recyclable waste amounts were reduced by eighty-three percent!

Continual efforts are made to ensure that the overall environment at GEMS is as healthy as possible. There are currently no hazardous or dangerous products used or stored onsite. GEMS participates as a member of the Safety Occupational Health Advisory Council to ensure consistent adherence to stringent German environmental laws. All paper that is purchased carries the Forest Stewardship Council Certification. GEMS uses a "paperless" approach, when possible. Communication with parents is done digitally and teachers utilize cloud based computing so that students can share work digitally. When possible, furniture purchased is certified by the Business and Institutional Furniture Manufacturers Association.

#### **Element 1D: Alternative transportation.**

Our school provides the following alternative transportation options to driving in single occupancy vehicles to and from school. (Check all that apply)

- Our school participates in a "Safe Routes to School" or similar program.
- Our school has designated carpool parking stalls.
- Our school offers yellow school bus service.
- Our school is served by public transportation service.
- All school buses that serve our students were built after 1994 when the first emission standards were adopted.
- Our school has a well-publicized no idling policy that applies to all vehicles including school buses.
- Our school has a vehicle loading/unloading area(s) at least 25 feet from building air intakes, doors, and windows.
- Our school has a greenhouse gas emission reduction plan in place that targets transportation. We measure our annual progress against our reduction goal.

2. Use the list above as a guide to describe alternative transportation options to driving in a single occupancy vehicle to and from school. Include how the alternatives are promoted, any data you have about participation in school bus service, public transportation, carpools, ride-sharing, and commuting to school by walking or biking. (Maximum 250 words)

The students and staff of Garmisch Elementary Middle School are committed to using alternative transportation options. Travel for all student study trips is completed either by walking, school bus, or public transportation. There is a designated motor/carpool parking spot and the school has a strict no idling policy.

Fifty-five percent of the students at GEMS live on the military base and walk or bike to and from school each day. To ensure the safety of walkers and bikers, many parents walk to and from school with their children. In addition, the garrison military police patrol the area surrounding the school, every morning and afternoon, to ensure the safety of the children who walk and bike to school.

While the majority of students walk or bike to school each day, 45% of the school population lives off the military installation. Of those students who reside outside the military installation, 77% use the school provided bus system. Vehicles used for transporting school children meet all required German emission controls for commercial vehicles. Combining the number of children who walk or ride bicycles with the number of students who use the school provided bus service each day indicates that 90% of the student population uses alternative transportation options each day.

The staff of GEMS is also committed to using alternative transportation options. Over 50% of the staff routinely bike, walk, carpool or use public transportation to go to work each day.

## **Pillar 2: Improve the health and wellness of students and staff.**

### **Element 2A: An integrated school environmental health program.**

1. Which of the following programs or practices does your school implement to ensure the environmental health of the school community? (Check all that apply)

Our school implements an up-to-date Integrated Pest Management program.

Our school implements an up-to-date Indoor Air Quality Management Plan modeled after the EPA's Indoor Air Quality (IAQ) Tools for Schools or other national recognized model.

Our school has identified and properly removed sources of elemental mercury and prohibits its purchase and use in the school.

Our school does not have any wood playground equipment or other structures that contain chromate copper arsenate or we have identified these structures and have taken steps to reduce exposure.

Our school has a comprehensive green cleaning program.

Our school has tested all frequently occupied rooms at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L



or our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L.

Our school has an Asthma Management Program consistent with the National Asthma Education and Prevention Program.

Our school has a chemical management program in place, with elements of purchasing, inventory, storage, training, spills, and hazards communication.

2. Use the list above as a guide to describe how your school implements and measures the success of your integrated environmental health programs and practices to ensure the health and safety of the school community. Include information on how your school addresses exposure to health hazards including radon, chromate copper arsenate, carbon monoxide, chemicals, asthma triggers, and mold. (Maximum 250 words)

GEMS and the Directorate of Public Works work together to ensure that environmental health and safety of the school community. The school has an up to date Indoor Air Quality Management Plan modeled after the EPA's Indoor Air Quality (IAQ) Tools for Schools. The school will be taking additional steps to ensure the air quality at the school with the planned school remodel/expansion, slated for construction in 2017. As part of the renovation, planned ventilation system upgrades will target air quality.

GEMS provides a clean and safe place for children to learn and play, both indoors and out. The cleaning contractor uses vinegar based cleaning products and no pesticides are used anywhere on the school grounds. The playground does not have any wooden playground equipment or other structures that contain copper arsenate. There are no products containing elemental mercury at the school. The school has been surveyed for asbestos, and all building elements that did contain asbestos have been removed according to Host Nation regulations. The school has not had any problems with mold. The maintenance and cleaning staff routinely inspect the building. GEMS has a chemical management program in place which meets US Army and German regulations. GEMS was tested for radon and a pumping ventilation system was installed; tests confirm levels below 4 pCi/L.

## **2B. High standards of nutrition, fitness, and quality outdoor time for both students and staff.**

1. Which of the following programs or practices does your school implement to promote nutrition, physical activity, and overall school community health? (Check all that apply).

Our school participates in the “Coordinated School Health” program ([www.cdc.gov/HealthyYouth/cshp/](http://www.cdc.gov/HealthyYouth/cshp/)).

Our school participates in the USDA's Healthier School Challenge.

Our school participates in a Farm to School or comparable program to use local, fresh food in our cafeteria.

Our school has a food garden either on-site or in close proximity to our building, which is utilized by the cafeteria or by teachers.

[X] Over the past year, our students spent an average of at least 120 minutes per week (for middle and high schools) or 90 minutes per week (for elementary schools) in school supervised physical education.

[X] At least 50% of our students' annual physical education and physical activity (including recess) takes place outdoors.

[ ] At least 50% of our students have participated in the EPA's Sunwise or equivalent program (to protect students from skin cancer).

[X] Our school integrates health measures into student assessments.

[X] Health, counseling and psychological services are offered for both students and staff

[X] Families/communities are involved in an integrated school environmental health program

2. Use the list above as a guide to describe how your school implements high standards of nutrition, fitness, and quality outdoor time for both students and staff. (Maximum 250 words)

GEMS is committed to encouraging healthy lifestyles. The school nurse created a *Healthy People, Healthy Planet Wellness Program* for staff and students. She teaches wellness focused lessons in all grades. To share information with families, the Weekly School Bulletin includes "Nurse's Notes" which offers healthy lifestyle tips. The nurse leads weekly staff fitness activities and the school participates in the Garrison's annual Healthy Lifestyle Challenge. A GEMS Family Health and Fitness Night is scheduled for the Spring of 2016.

After constructing a composting site last year, students are designing and constructing a school garden, which will be planted in the spring.

Encouraging physical activity is a cornerstone of the GEMS wellness program. Even though GEMS is located in an alpine environment, students go out for recess, in all weather! The school partners with Youth Services, to offer students the opportunity to ski during the winter. Every Wednesday, for eight weeks, students participate in a three-and-a-half-hour ski lesson. This is in addition to regular physical education. Students also participate in GEMS' annual Turkey Trot and Spring Sprint fun runs. GEMS offers an Outdoor Education Club, a Running Club and a Dance Club. Currently, 71% of the students participate in at least one of these clubs.

Students and staff have access to comprehensive mental health services. A counselor provides character education to all grades and provides individual counseling, as needed. Students and staff can take advantage of free mental health services provided through the Military, Family, Life Counseling Program.



**Pillar 3: Provide effective environmental and sustainability which incorporates STEM, civic skills, and green career pathways.**

**Element 3A: Interdisciplinary learning about the key relationships between dynamic environmental, energy, and human systems.**

1. Describe how your school integrates and assesses/measures students' environmental or sustainability literacy at each grade level including curriculum, courses, outdoor learning, and assessments. (Maximum 250 words)

From the environmental tips that are sent out in the Daily Bulletin, to the student designed recycling/composting/garden initiative, environmental literacy has been completely integrated at GEMS.

Environmental literacy is incorporated throughout GEMS with the implementation of a rigorous and embedded STEM model. Using a systemic approach, science, math, and critical thinking strategies relating to sustainability have been incorporated into the curriculum in all grades. The Principal has made the expectation that classes will incorporate the outside environment into their studies. This idea has been supported and embraced by staff. Whether it is studying erosion, observing biomes and the life cycle of plants, or collecting weather data, the outdoor environment serves as a vital part of learning at GEMS.

Assessment of environmental literacy occurs in a variety of ways. Student led analysis of the recycling/composting program has shown an 83% reduction in waste! By embedding environmental literacy into the curriculum, assessment of student knowledge of environmental literacy occurs as part of a teacher's ongoing assessment and the evaluation of projects/assignments.

Environmental literacy learning opportunities exist beyond the school day in several after school clubs. The Outdoor Education Club provides hands on experiences for students to participate in outdoor recreation opportunities and to study the impact that humans have had on the local landscape. The Young Engineers Club uses recycled materials and "Green Snap Circuits" in sustainable energy projects. Annual STEM Nights and the STEM Amazing Race are made possible through partnerships with scientists and engineers who share their expertise with students.

2. Describe professional development opportunities available to your teachers in environmental and sustainability concepts and the number and percentage of teachers who participated in these opportunities during the past 12 months. (Maximum 250 words)

GEMS has taken a lead role in providing STEM/environmental professional development to educators across DoDEA. In 2015, GEMS organized and hosted a three-day graduate level course for 32 science educators from around Europe. This course provided educators with training on the use of Vernier data collections tools (these tools can be used for data collection and analysis related to climate, soil and water quality, and solar and wind energy). This course provided hands on, environmentally focused training to promote the integration of STEM and critical thinking skills. It was so successful that GEMS will be hosting another course in the summer of 2016 which will be designed for elementary school educators.

By developing and leading the “Worldwide Sunflower Project,” GEMS’s Information Specialist and Educational Technologist provided training and support to 144 teachers across DoDEA. As a result of this project, teachers experienced first-hand the power of integrating STEM practices and environmental education into an inquiry based, hands on, and collaborative project.

Site level professional development is centered on 21<sup>st</sup> Century teaching implementation that is supported through the use of service and problem based learning. Environmental education is intentionally addressed in professional development and planning to ensure it is woven into the curriculum. In addition to embedding environmental education into professional development, logistical environmental related training has also been provided. All school staff has been trained on proper recycling techniques. All staff also participated in a student led Water Conservation Training.

**Element 3B: Use of the environment and sustainability to develop STEM content knowledge and thinking skills to prepare graduates for the 21st century technology-driven economy.**

1. Describe how environmental and sustainability education at your school supports teaching science and engineering practices (e.g., asking questions, developing and using models, planning and carrying out investigations, analyzing and interpreting data, using mathematics and computational thinking, constructing explanations, and engaging in argument from evidence) and supports robust general science education that includes a deep understanding of life, physical, and earth sciences. (Maximum 250 words)

Students at GEMS are engaged in exciting interdisciplinary STEM activities that require the utilization of science and engineering practices. Problem based learning provides a powerful way for sustainability education to support the implementation of STEM practices. The school’s recycling/composting/garden project exemplifies this idea. Through design and construction of the compost site, students applied STEM practices to improve the environment of their school. Application of STEM practices continued through the student led data collection, analysis and evaluation of the project’s impact. This type of learning occurs in all grades, in age appropriate and meaningful ways. For example, while middle school students debate the environmental impact of the industrialization of our food in their study of the book, *Chew on This*, 1<sup>st</sup> graders learn about the necessity of a healthy environment as they grow and observe edible plants.

The implementation of STEM initiatives has been actively supported by the school’s Educational Technologist and Information Specialist. They have acted as STEM mentors for not

only the staff at GEMS but also across DoDEA. Through their efforts, GEMS facilitated the “Worldwide Sunflower Project” which allowed 144 classrooms, located around the world, to study and evaluate the impact of climate on plant growth. Through carrying out investigations, collecting and analyzing data, and collaborating with other participants, students used science and engineering standards to draw meaningful conclusions regarding climate and growing conditions. This project exemplified authentic application of science and engineering practices into environmental and sustainability education, for not only GEMS students, but students worldwide.

2. Describe how your curriculum connects classroom content to career and college readiness, particularly post-secondary options that focus on environmental and sustainability field studies and/or careers. (Maximum 250 words)

GEMS offers students hands on opportunities to explore environmental careers by integrating environmental issues across the curriculum. Service learning, problem based learning and simulations make learning “come alive” for students. For example, the recycling and compost project exposed students to the fields of environmental engineering, biology and urban planning. During the design process of GEM’s remodel, students were asked to be “architects” and provide input on design elements and features of the school. After the expansion plans were finalized, 8<sup>th</sup> graders utilized math and engineering skills to draw up the plans of the new construction. Using surveying equipment, they mapped out the new building site. Host Nation students explored conservation careers through studying and debating the benefits of government versus private venture approaches to land management/conservation in Germany. Sixth graders acted as scientists as they explored energy problems and researched how sustainable energy sources can address future energy problems. Through a study unit on rain forests, 4<sup>th</sup> graders not only created an interactive museum for other students to learn about endangered animals, but also explored the fields of botany, biology and ecology.

Partnerships within the community provide further exposure to environmental/sustainability related fields of study. The local garrison houses the George C. Marshall Center for European Security Studies and the NATO school, which employs a variety of experts in the fields of science, engineering and international relations. These experts are readily available to make presentations, consult with teachers and to assist in the implementation of STEM programs and events.

**Element 3C: Development of civic engagement knowledge and skills, and students' application of these to address sustainability and environmental issues in their community.**

Describe your students' civic and/or community engagement experiences integrating environmental and sustainability topics/concepts, field studies, community service, etc. Address if and how students conduct an age-appropriate community engagement projects around a self-selected environmental or sustainability topic at every grade level; and partnering with local academic, business, informal science institutions and/or other schools to help advance the school toward the 3 Pillars and/or assist the progress of (an) other school(s), particularly a school with lesser capacity in these areas. (Maximum 250 words)



Green living is a way of life at GEMS! Students are incredibly proud of the success of the recycling/composting program and are excited to roll out the school garden, which they are currently designing. The success of this program lies in the fact that it is student led and driven. Students are responsible for the management of classroom recycling and they have shared what they have learned about recycling by providing training to their own families, so that proper recycling can occur at home.

Students demonstrate their commitment to improving the environment by participating in garrison clean-up activities. Classes have also taken on specific environmental issue civic projects, such as water conservation and water quality. During SY 14/15, 4<sup>th</sup> graders researched and then made a presentation to the entire school about the importance of conserving water. During SY 14/15, the student council worked to raise awareness and funds to help provide victims of natural disasters with potable water.

GEMS has also taken on a leadership role in the implementation of STEM for staff and students. GEMS organized and facilitated the DoDEA Worldwide Sunflower Project, which allowed 144 classes across DoDEA to study the impact of climate conditions on plant growth. GEMS also hosted and organized a three-day graduate level environmentally focused training to promote the integration of STEM and critical thinking skills. Educators from all over DoDEA Europe attended the course. It was so successful that GEMS will be hosting another course in the summer of 2016.



GEMS 4<sup>th</sup> graders designed and worked together to build our composting system (left). Students are responsible for emptying classroom bins and turning and maintaining the compost. The soil generated from our organic material will be used in our school garden next spring.





At least 55% of students and over 50% of staff regularly use alternative modes of transportation to commute to and from school.



Students inspect an Audi E-Tron electric car while learning about alternative energy sources. Below, students receive recycling and sustainability training with the Garmisch Director of Public Works.



The Wonderful Wednesday Program, various after school clubs, and our Annual Turkey Trot are just a few ways we show our commitment towards healthy living and overall wellness for students, family and staff. Nutrition and wellness is further promoted through ongoing health classes in school, as well as regular publications such as our Bulletins which include advice for healthy living, recipes, Nurse's Notes and Environmental Tips.



Conservation and environmental consciousness are priorities at GEMS. Here, students are pictured presenting their project on water conservation, participating in a Garrison garbage clean-up, and planting trees on site.

